

CLAIMS

1. Printing device for printing a substrate with a printing medium using the "drop-on-demand" principle, comprising a print head, which is arranged in such a manner that it can be moved to
5 and fro substantially transversely with respect to the direction in which the substrate to be printed is conveyed and has at least one spray nozzle with an interacting piezoelectric element for generating and releasing a drop of the printing medium on demand, the spray nozzle being in communication with a flexible
10 working container, which is arranged at a fixed position, for degassed printing medium at a working height with respect to the spray nozzle which working height lies within a predetermined height range, in order to keep the pressure of the printing medium within a predetermined pressure range, characterized in
15 that the working container (30) is in communication with a releasable flexible reservoir (32) for degassed printing medium.

2. Printing device according to claim 1, characterized in that the reservoir (32) is positioned at a height difference above
20 the working container (30).

3. Printing device according to one of the preceding claims, characterized in that the printing device is provided with displacement means for moving the reservoir (32) upwards with
25 respect to the working container (30).

4. Printing device according to claim 3, characterized in that the displacement means comprise support means, which can be tilted towards the working container (30), for supporting the
30 reservoir (32).

5. Printing device according to claim 4, characterized in that the support means comprise a support plate (50), which can rotate about a rotation point (54) located in the vicinity of
35 the end (52) which faces the working container (30), and at the opposite end (56) is connected to counter-pressure means (58), and which in the horizontal position bears against supporting means (51).

6. Printing device according to claim 5, characterized in that there are signalling means (66) for remote detection of tilting of the support plate (50).

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7. Printing device according to claim 6, characterized in that the signalling means (66) are connected to a switch (62), which is energized in the event of the support plate (50) tilting.

10 8. Printing device according to one of the preceding claims, characterized in that the flexible reservoir (32) is made from a metalized plastic film which is impervious to gas.

15 9. Printing device according to one of the preceding claims, characterized in that the height dimension of the reservoir (32), in the completely filled state, is smaller than the height dimension of the working container (30).

20 10. Printing device according to one of the preceding claims, characterized in that the reservoir (32) has a front surface (80) and a rear surface, which are connected to one another along the periphery (82), an outlet opening (85) with connecting means (86) for coupling to the working container (30) being provided in a peripheral part (84).

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11. Printing device according to claim 10, characterized in that the peripheral part (84) is shaped in such a manner that the inner wall (88) of the reservoir (32) has a gradual transition in the direction of the outlet opening (85).

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12. Printing device according to one of the preceding claims 10-11, characterized in that the ratio of the length of a front surface (80) of the reservoir (32) to its width is greater than 2.5.

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13. Flexible reservoir, filled with degassed printing medium, in particular obviously intended for a printing device according to one of the preceding claims, which reservoir (32) comprises a front surface (80) and a rear surface made from a gas-

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impervious, metalized plastic film, which are connected to one another along the periphery (82), a closable outlet opening (85) with connecting means (86) for coupling to a working container (30) being provided in a peripheral part (84).

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14. Reservoir according to claim 13, characterized in that the ratio of the length of a front surface (80) of the reservoir (32) to its width is greater than 2.5.

10 15. Reservoir according to claim 13 or 14, characterized in that the peripheral part (84) is shaped in such a manner that the inner wall (88) of the reservoir (32) has a gradual transition in the direction of the outlet opening (85).

15 16. Working container for degassed ink, in particular obviously intended for use for a printing device according to one of the preceding claims 1-12, comprising a flexible container (30) made from a metalized plastic film, a first peripheral part of which is provided with an outlet opening with connecting means for
20 coupling to a feed leading to a print head, and a second peripheral part of which is provided with an inlet opening with connecting means for coupling to a reservoir.

25 17. Feed system for feeding a printing medium to a printing device, in particular obviously intended for a printing device according to one of claims 1-12, characterized in that the system comprises a flexible reservoir according to one of claims 13-15, which is operatively connected to a working container according to claim 16.